Gunther Roelkens

List of Publications by Year in descending order

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228 papers

8,813 citations

³⁸⁷⁴² 50 h-index

89 g-index

229 all docs 229 docs citations

times ranked

229

5801 citing authors

| # | Article | IF | CITATIONS |
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| 1 | Illâ€V/silicon photonics for onâ€chip and intraâ€chip optical interconnects. Laser and Photonics Reviews, 2010, 4, 751-779. | 8.7 | 427 |
| 2 | An introduction to InP-based generic integration technology. Semiconductor Science and Technology, 2014, 29, 083001. | 2.0 | 422 |
| 3 | High-efficiency fiber-to-chip grating couplers realized using an advanced CMOS-compatible Silicon-On-Insulator platform. Optics Express, 2010, 18, 18278. | 3.4 | 418 |
| 4 | An ultra-small, low-power, all-optical flip-flop memory on a silicon chip. Nature Photonics, 2010, 4, 182-187. | 31.4 | 369 |
| 5 | High efficiency Silicon-on-Insulator grating coupler based on a poly-Silicon overlay. Optics Express, 2006, 14, 11622. | 3.4 | 242 |
| 6 | Hybrid Integrated Platforms for Silicon Photonics. Materials, 2010, 3, 1782-1802. | 2.9 | 242 |
| 7 | Expanding the Silicon Photonics Portfolio With Silicon Nitride Photonic Integrated Circuits. Journal of Lightwave Technology, 2017, 35, 639-649. | 4.6 | 232 |
| 8 | An octave-spanning mid-infrared frequency comb generated in a silicon nanophotonic wire waveguide. Nature Communications, 2015, 6, 6310. | 12.8 | 191 |
| 9 | Laser emission and photodetection in an InP/InGaAsP layer integrated on and coupled to a Silicon-on-Insulator waveguide circuit. Optics Express, 2006, 14, 8154. | 3.4 | 187 |
| 10 | Assessment on the Achievable Throughput of Multi-Band ITU-T G.652.D Fiber Transmission Systems. Journal of Lightwave Technology, 2020, 38, 4279-4291. | 4.6 | 184 |
| 11 | Mid-infrared to telecom-band supercontinuum generation in highly nonlinear silicon-on-insulator wire waveguides. Optics Express, 2011, 19, 20172. | 3.4 | 162 |
| 12 | High efficiency grating coupler between silicon-on-insulator waveguides and perfectly vertical optical fibers. Optics Letters, 2007, 32, 1495. | 3.3 | 149 |
| 13 | Ultra-thin DVS-BCB adhesive bonding of III-V wafers, dies and multiple dies to a patterned silicon-on-insulator substrate. Optical Materials Express, 2013, 3, 35. | 3.0 | 147 |
| 14 | High efficiency diffractive grating couplers for interfacing a single mode optical fiber with a nanophotonic silicon-on-insulator waveguide circuit. Applied Physics Letters, 2008, 92, . | 3.3 | 144 |
| 15 | Hybrid IIIV on Silicon Lasers for Photonic Integrated Circuits on Silicon. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 158-170. | 2.9 | 144 |
| 16 | Novel Light Source Integration Approaches for Silicon Photonics. Laser and Photonics Reviews, 2017, 11, 1700063. | 8.7 | 143 |
| 17 | Bridging the mid-infrared-to-telecom gap with silicon nanophotonic spectral translation. Nature Photonics, 2012, 6, 667-671. | 31.4 | 141 |
| 18 | â^'1 V bias 67 GHz bandwidth Si-contacted germanium waveguide p-i-n photodetector for optical links at 56 Gbps and beyond. Optics Express, 2016, 24, 4622. | 3.4 | 141 |

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| 19 | Low-Threshold Heterogeneously Integrated InP/SOI Lasers With a Double Adiabatic Taper Coupler. IEEE Photonics Technology Letters, 2012, 24, 76-78. | 2.5 | 138 |
| 20 | Germanium-on-Silicon Mid-Infrared Arrayed Waveguide Grating Multiplexers. IEEE Photonics Technology Letters, 2013, 25, 1805-1808. | 2.5 | 127 |
| 21 | 56 Gb/s Germanium Waveguide Electro-Absorption Modulator. Journal of Lightwave Technology, 2016, 34, 419-424. | 4.6 | 127 |
| 22 | Grating-Based Optical Fiber Interfaces for Silicon-on-Insulator Photonic Integrated Circuits. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 571-580. | 2.9 | 114 |
| 23 | A III-V-on-Si ultra-dense comb laser. Light: Science and Applications, 2017, 6, e16260-e16260. | 16.6 | 114 |
| 24 | Demonstration of Silicon-on-insulator mid-infrared spectrometers operating at 381¼m. Optics Express, 2013, 21, 11659. | 3.4 | 111 |
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| 26 | Silicon-Based Photonic Integration Beyond the Telecommunication Wavelength Range. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 394-404. | 2.9 | 106 |
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| 29 | Transfer-printing-based integration of a III-V-on-silicon distributed feedback laser. Optics Express, 2018, 26, 8821. | 3.4 | 98 |
| 30 | Heterogeneously integrated III-V/silicon distributed feedback lasers. Optics Letters, 2013, 38, 5434. | 3.3 | 93 |
| 31 | Hybrid III–V/Si Distributed-Feedback Laser Based on Adhesive Bonding. IEEE Photonics Technology Letters, 2012, 24, 2155-2158. | 2.5 | 85 |
| 32 | Heterogeneous III-V on silicon nitride amplifiers and lasers via microtransfer printing. Optica, 2020, 7, 386. | 9.3 | 84 |
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| 34 | High-Responsivity Low-Voltage 28-Gb/s Ge p-i-n Photodetector With Silicon Contacts. Journal of Lightwave Technology, 2015, 33, 820-824. | 4.6 | 75 |
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| 36 | 50 dB parametric on-chip gain in silicon photonic wires. Optics Letters, 2011, 36, 4401. | 3.3 | 70 |

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| 37 | 100-Gbps RZ Data Reception in 67-GHz Si-Contacted Germanium Waveguide p-i-n Photodetectors. Journal of Lightwave Technology, 2017, 35, 722-726. | 4.6 | 69 |
| 38 | 1310-nm Hybrid III–V/Si Fabry–Pérot Laser Based on Adhesive Bonding. IEEE Photonics Technology Letters, 2011, 23, 1781-1783. | 2.5 | 66 |
| 39 | Germanium-on-silicon planar concave grating wavelength (de)multiplexers in the mid-infrared. Applied Physics Letters, 2013, 103, . | 3.3 | 66 |
| 40 | Silicon-based heterogeneous photonic integrated circuits for the mid-infrared. Optical Materials Express, 2013, 3, 1523. | 3.0 | 65 |
| 41 | Transfer-printing-based integration of single-mode waveguide-coupled III-V-on-silicon broadband light emitters. Optics Express, 2016, 24, 13754. | 3.4 | 64 |
| 42 | Silicon-on-Insulator Polarization Rotator Based on a Symmetry Breaking Silicon Overlay. IEEE Photonics Technology Letters, 2012, 24, 482-484. | 2.5 | 60 |
| 43 | III–V-on-Silicon Photonic Integrated Circuits for Spectroscopic Sensing in the 2–4 μm Wavelength Range. Sensors, 2017, 17, 1788. | 3.8 | 60 |
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| 46 | Compact InAlAs–InGaAs Metal– Semiconductor– Metal Photodetectors Integrated on Silicon-on-Insulator Waveguides. IEEE Photonics Technology Letters, 2007, 19, 1484-1486. | 2.5 | 58 |
| 47 | High sensitivity 10Gb/s Si photonic receiver based on a low-voltage waveguide-coupled Ge avalanche photodetector. Optics Express, 2015, 23, 815. | 3.4 | 56 |
| 48 | CMOS Compatible Silicon-on-Insulator Polarization Rotator Based on Symmetry Breaking of the Waveguide Cross Section. IEEE Photonics Technology Letters, 2012, 24, 2031-2034. | 2.5 | 55 |
| 49 | Air-stable short-wave infrared PbS colloidal quantum dot photoconductors passivated with Al2O3 atomic layer deposition. Applied Physics Letters, 2014, 105, . | 3.3 | 55 |
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| 51 | Study of evanescently-coupled and grating-assisted GalnAsSb photodiodes integrated on a silicon photonic chip. Optics Express, 2012, 20, 11665. | 3.4 | 51 |
| 52 | Real-Time 100 Gb/s NRZ and EDB Transmission With a GeSi Electroabsorption Modulator for Short-Reach Optical Interconnects. Journal of Lightwave Technology, 2018, 36, 90-96. | 4.6 | 50 |
| 53 | Microâ€Transferâ€Printed IIIâ€Vâ€onâ€Silicon Câ€Band Semiconductor Optical Amplifiers. Laser and Photonics Reviews, 2020, 14, 1900364. | 8.7 | 50 |
| 54 | Bridging the Gap Between Nanophotonic Waveguide Circuits and Single Mode Optical Fibers Using Diffractive Grating Structures. Journal of Nanoscience and Nanotechnology, 2010, 10, 1551-1562. | 0.9 | 49 |

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| 56 | Widely tunable 23  μm III-V-on-silicon Vernier lasers for broadband spectroscopic sensing. Photonics Research, 2018, 6, 858. | 7.0 | 47 |
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| 61 | 27 dB gain III–V-on-silicon semiconductor optical amplifier with > 17 dBm output power. Optics Express, 2019, 27, 293. | 3.4 | 43 |
| 62 | A Thermally Tunable III–V Compound Semiconductor Microdisk Laser Integrated on Silicon-on-Insulator Circuits. IEEE Photonics Technology Letters, 2010, 22, 1270-1272. | 2.5 | 42 |
| 63 | Recent Advances in the Photonic Integration of Mode-Locked Laser Diodes. IEEE Photonics Technology Letters, 2019, 31, 1870-1873. | 2.5 | 39 |
| 64 | Low Noise Heterogeneous IIIâ€Vâ€onâ€Siliconâ€Nitride Modeâ€Locked Comb Laser. Laser and Photonics Reviews 2021, 15, 2000485. | ⁵ ,8.7 | 38 |
| 65 | 23 µm range InP-based type-II quantum well Fabry-Perot lasers heterogeneously integrated on a silicon photonic integrated circuit. Optics Express, 2016, 24, 21081. | 3.4 | 36 |
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| 69 | Micro-transfer-printed III-V-on-silicon C-band distributed feedback lasers. Optics Express, 2020, 28, 32793. | 3.4 | 33 |
| 70 | DAC-Less and DSP-Free 112 Gb/s PAM-4 Transmitter Using Two Parallel Electroabsorption Modulators. Journal of Lightwave Technology, 2018, 36, 1281-1286. | 4.6 | 32 |
| 71 | Mid-infrared Vernier racetrack resonator tunable filter implemented on a germanium on SOI waveguide platform [Invited]. Optical Materials Express, 2018, 8, 824. | 3.0 | 32 |
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| 7 5 | Compact Mach–Zehnder Interferometer Ce:YIG/SOI Optical Isolators. IEEE Photonics Technology Letters, 2012, 24, 1653-1656. | 2.5 | 28 |
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| 80 | Verticalâ€Cavity Siliconâ€Integrated Laser with Inâ€Plane Waveguide Emission at 850Ânm. Laser and Photonics Reviews, 2018, 12, 1700206. | 8.7 | 23 |
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| 82 | Reflectionless Tilted Grating Couplers With Improved Coupling Efficiency Based on a Silicon Overlay. IEEE Photonics Technology Letters, 2013, 25, 1195-1198. | 2.5 | 22 |
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| 85 | Integrated Silicon-on-Insulator Spectrometer With Single Pixel Readout for Mid-Infrared Spectroscopy. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-7. | 2.9 | 22 |
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| 88 | Heterogeneously integrated III–V-on-silicon 2.3x <i>ι¼</i> m distributed feedback lasers based on a type-II active region. Applied Physics Letters, 2016, 109, . | 3.3 | 21 |
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| 116 | Low-Power (1.5 pJ/b) Silicon Integrated 106 Gb/s PAM-4 Optical Transmitter. Journal of Lightwave Technology, 2020, 38, 432-438. | 4.6 | 13 |
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| 123 | Fast Wavelength-Tunable Lasers on Silicon. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-8. | 2.9 | 10 |
| 124 | <inline-formula> <tex-math notation="LaTeX">\$4imes25\$ </tex-math> </inline-formula> Gbps Polarization Diversity Silicon Photonics Receiver With Transfer Printed III-V Photodiodes. IEEE Photonics Technology Letters, 2019, 31, 287-290. | 2.5 | 10 |
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| 126 | Silicon-on-insulator nanophotonic waveguide circuit for fiber-to-the-home transceivers. , 2008, , . | | 9 |

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| 129 | Silicon-based Photonic Integrated Circuits for the Mid-infrared. Procedia Engineering, 2016, 140, 144-151. | 1.2 | 8 |
| 130 | Resonant optical receiver design by series inductive peaking for sub-6 GHz RoF. Microwave and Optical Technology Letters, 2017, 59, 2279-2284. | 1.4 | 8 |
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| 147 | Thermally Tunable Quantum Cascade Laser With an External Germanium-on-SOI Distributed Bragg Reflector. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-7. | 2.9 | 5 |
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